

Meeting of the Decommissioning Community Workgroup (#17)
Tuesday, October 21, 2003
Sandusky High School

The meeting began at 5:30 p.m. Present were the following Workgroup members: Chris Gasteier, Stan Taylor, Ralph Roshong, David Stein, Bob Speers, Jeff Fantozzi, John Blakeman, and new members Montez McDuffie, Betty Irby and Mary Warren. Also present, from NASA, were: Tim Polich, Decommissioning Project Manager; Keith Peecook, Senior Project Engineer; Sally Harrington, Public Affairs Specialist; Mike Blotzer, Chief of Environmental Management at the Glenn Center; Peter Kolb, Decommissioning Environmental Manager; Linda Dukes-Campbell, Chief of Community and Media Relations at Glenn; Bill Wessel, Director of Safety and Assurance Technologies at Glenn; Kevin Coleman, History Officer at Glenn; and, respectively, Dan White and Linda Cognata, the Facility and Program Manager and Facility and Program Coordinator at Glenn. Also present were Jim Crocker, Project Manager for Montgomery Watson Harza (MWH), Debbie Demaline of Indyne, Inc., and Susan Santos, Michael Morgan, Burt Peretsky and Anne Chabot of FOCUS GROUP.

NASA Decommissioning Project Manager Tim Polich began the meeting and welcomed the group to the 17th Workgroup meeting. Because there were several new members in attendance, Tim had members introduce themselves and comment on their affiliation. Next, Susan Santos of FOCUS GROUP asked for and received Workgroup acceptance of the July meeting minutes and reviewed the October meeting agenda. She explained the Community Information Session activities that would take place immediately following the Workgroup meeting, invited members to stay and encouraged them to act as NASA's ambassadors to the public during the event.

Decommissioning Update

NASA Senior Project Engineer Keith Peecook gave a Project Update beginning with a description of the August Blackout and the impact it had on decommissioning activities- and how NASA responded. Keith mentioned that he had been asked this question by Workgroup members following the event and wanted to pass on his response. Reactor Facility and how NASA responded. Keith explained that electric power was lost late in the afternoon of August 14 when decommissioning workers were right in the middle of mixing and pouring the immobilizing substance into a cask (more description of this later in the minutes).

Keith reported the following on the Blackout and NASA's response: The propane-fueled generator started as designed, providing power for emergency lighting and sump pumps. All personnel stopped working, secured their equipment and exited through the normal access point. Battery-operated, hand-held friskers were used to monitor workers as they left the area. When normal power was restored (roughly 4 hours later) all loads automatically transferred back to normal power and the generators shut down. Keith reported that other than 1 1/2 hours of lost work time, there was no impact from the power outage. He added that NASA is exploring the cost of purchasing an uninterruptible power supply for running portal monitors. Should a power outage occur in the near future, it would be very inefficient to use friskers on the 150 employees currently on the job. Workgroup member John Blakeman asked, "Were the employees trained to deal with this situation?" Keith responded that every worker had been through a Radiation Training program, which included response actions to these types of situations.

Next, Keith presented a summary of ongoing decommissioning activities throughout the 27-acre Reactor Facility site. He began with a description of efforts to remove the reactor internals (including the core box), which are mostly metal components that had become activated

during normal operations. Keith emphasized the extensive planning that preceded actual segmentation (which began August 4), including the hiring of an experienced segmentation contractor - Wachs Technical Services, Inc., - which designed and tested long-handled tooling and modified the shrapnel shields (three 20-ton metal covers over the reactor) to use as physical barriers from radiation “shine.” Next, Keith described mock-up training. He said Wach’s segmentation workers practiced each removal procedure on the 100-kilowatt mock-up reactor, which has the same layout as the 60-megawatt reactor but very low radiation field. John Blakeman asked, “Are these internals steel?” Keith responded that they are principally aluminum, which doesn’t activate much, but that some are stainless steel.

Keith added that some reactor internals contain beryllium. John Blakeman asked, “Are you cutting up the beryllium so that there are particles of beryllium floating around Perkins Township?” Keith responded by showing a series of slides depicting the removal of Horizontal Beam Tubes – which, he explained – were the first components removed because of their high radioactivity. He added that it was necessary to remove them in order to gain easier access the reactor core box. Keith said that beryllium was located in one of the HB Tubes, and in the beryllium plate inside the core box. He also passed around a sample of the immobilizing substance that was developed specifically for this project. He explained that the syrup-like, rubberized substance would be poured into the shipping container to harden and encase the beryllium – to eliminate the possibility of the beryllium cracking and releasing the radioactive gas, tritium. Keith then showed slides of the 3,500-pound reactor head being removed. He noted that the contractor was still deciding whether to ship this as one piece or cut it into two pieces. Other slides showed personnel working remotely with long-handled tools and viewing the workspace through TV monitors. Keith said he expects internals segmentation to be completed by late spring, and vessel segmentation done by mid-summer.

Waste Packaging and Shipment

Keith reported that the first shipment of Class B low-level radioactive waste (LLRW) – consisting of HB Tube components - was sent on September 3rd to the licensed disposal facility at Barnwell, South Carolina. Keith presented a series of slides showing various shipping containers, known as “strong, tight containers,” which include B-25 boxes. He showed how one large piece of material – a door to a former Hot Cell (where experiments were once conducted) – was packaged in a 20-foot long “SeaLand” container. Workgroup member Jeff Fantozzi asked if the scales shown in the slides were digital, certified and tested. Peter Kolb of NASA responded that they are digital and that a maintenance schedule is kept. Other slides depicted cask liners, used for packaging the Class B waste materials, being quality assurance tested. Finally, Keith showed slides of the cask being transported from Plum Brook Station.

Susan Santos clarified that the casks were used for this higher-level waste but stressed that it is still low-level radioactive waste (LLRW). John Blakeman asked if the liner was made of steel. Keith said they were, adding that the casks are comprised of two inches of steel, over six inches of lead, over another two inches of steel. Jim Crocker of MWH added that there are only three of these casks available for lease in the United States. Keith reiterated that planning for their arrival is critical and added that for every shipment he coordinates with Bill Walker (Community Workgroup member), Director of the Erie County Emergency Management Agency, as well as the local police and fire departments. For security, NASA doesn’t give public notice before shipments, but does put updates on the Toll-free Information Line when shipments have been delivered to the licensed sites. Workgroup member David Stein asked how much the load weighs. Keith responded that the truck weighs about 55-60,000 lbs. while the waste on board

weighs less than 1,000 lbs. He added that NASA had conducted studies on the road and the culverts and confirmed that they could withstand these loads.

Removal of Industrial Hazards

Next, Keith reported that work continues on other buildings on the Reactor Facility site, to prepare them for demolition. He noted that hazardous waste together with radioactive waste is classified as mixed waste, and can be very expensive to dispose. NASA is collecting hazardous waste beforehand, surveying it and disposing of it in the regular hazardous waste stream process that is used for all of Plum Brook Station's facilities. To date, all of the mercury fluorescent light fixtures (a total of 1200) and PCB ballasts (640) have been removed, while 5,000 cubic feet of asbestos has been removed (representing 30% of the total to be removed). Keith emphasized that at the Plum Brook Decommissioning Project, "everything must go (to the bare walls)" before the final radiological survey can be completed - and NASA's license with the U.S. Nuclear Regulatory Commission terminated. He reported that to date, 20 shipments of LLRW had been safely delivered to licensed sites, for a total of 500,000 lbs. of material. NASA expects to have shipped 18 million pounds of material by the end of the project.

Keith said that part of this total includes the double water tower that had stood adjacent to the Reactor Facility since 1959, until its demolition on October 15. He showed several slides and video clips to illustrate how the demolition contractor strategically placed explosives in the tower's footings to cause it to collapse in a controlled, safe manner. John Blakeman asked if there was any radiation content in the tower. Keith said that NASA had done, in advance, a lot of study regarding this question and had expected to find no content, adding that radiation professionals were the first people on site to survey the demolished tower and confirm that there was no radiation. Workgroup member Chris Gasteier asked about the former capacity of the water tower. Tim Polich responded that there were two chambers – the lower held 70,000 gallons and the upper, which was lined with stainless steel – held 35,000- 40,000 gallons. John Blakeman asked how tall it was. Keith said it had been 186 feet high. He also noted that he had contacted local officials before the demolition – letting them know there might be an explosive sound that might be heard by nearby neighbors. Susan Santos said that an announcement had also been placed on the telephone information line in advance.

Radiological Characterization

Next, Keith explained that to be able to dispose of waste, it must be properly characterized as to what type of radioactivity it contains, and how much. He said all waste material is being characterized prior to packaging it for shipment, adding that after all cleanup activities in an area are completed, a Final Status Survey will be performed to prove NASA has achieved the clean-up levels required for license termination. NASA will start the final characterization later this year. Keith then listed the planned next steps on the project. They include: continuing reactor internals segmentation; removing items from Hot Dry Storage; segmenting and disposing of the water tower and four other small structures; continuing the removal of fixed equipment from throughout the Reactor Facility, including the exhaust stack, piping, pumps, and electrical systems; and continuing waste shipments, which he said would average 2-5 trucks per week.

Waste Site Summary

Keith briefly described the three licensed facilities that are accepting LLRW from the Reactor Facility Decommissioning Project. He said most shipments to date have gone to Alaron reprocessing facility in Wampum, Pennsylvania. The facility receives material for radiological survey and release, and also for size reduction prior to sending it for ultimate disposal elsewhere.

The Class A waste (the lowest level of LLRW) is usually sent to the Envirocare facility, located in Clive, Utah, where it is stored in above-ground burial cells. He added that at the Barnwell facility, located in Aiken, South Carolina, Class A,B, and C LLRW can be accepted, and is buried in below grade vaults. Keith noted that one of NASA's shipments to Alaron was stopped for inspection and it passed "with flying colors."

Community Relations Update

Sally Harrington of NASA Glenn's Community and Media Relations Office reported that a Media Briefing had taken place at Plum Brook Station – in a conference room adjacent to the Reactor Facility – on October 20, to give local reporters an update on the Decommissioning Project and help publicize the Community Information Session (CIS), resulting in two articles on the day of the latter event. Sally noted that an extensive advertising campaign had supported the CIS, with ads placed in five area newspapers and on local radio stations. Sally also reported that the NASA Glenn Research Center offers many opportunities for learning through its Education Research Center and cited the example of the Aero Bus, a Glenn traveling exhibit that was parked just outside the school for CIS attendees to visit. She mentioned that in addition to traveling exhibits, there are many ways teachers can use the Glenn educational resources – through workshops, internships and lesson plans.

Susan Santos announced that she had copies available of the Decommissioning Project's semi-annual Environmental Sampling Report and offered to make copies available to Workgroup members, noting that several had shown interest in more information about environmental sampling when this topic was covered at a previous meeting.

Kevin Coleman, NASA Glenn History Officer, followed with an update on the progress being made on NASA Plum Brook archival works. He reported that a documentary video, intended for showing on area Public Broadcasting stations (and later, on the Discovery or History Channel) was nearing completion. He directed the group's attention to the exhibit he had set up for the CIS, where several archival Reactor Facility photos were displayed - and where video clips from the documentary would be shown. Kevin also announced that there are two books in production. The first is a 150-page narrative with an abundance of old photographs. This book will be distributed to the community and available at local libraries and would be ready in January or February. The second book is a 400-page "scholarly" edition that goes into much more depth about the history and technology of Plum Brook Station and the Reactor Facility. This will be available for purchase and for distribution at local libraries around 2007 or 2008.

The meeting adjourned at 6:50 p.m.